

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of the claims in the application.

Listing of Claims:

1. (Currently Amended) A thin analysis tool comprising:

 a first plate formed with first and second electrodes,
 a second plate facing the first and second electrodes of the first plate, and
 a reaction space defined between the first and second plates for holding a sample liquid,

 wherein the reaction space is provided with a reagent portion that dissolves when the sample liquid is held in the space, and

 wherein one of the first and second electrodes provides an electron release region between said one electrode and the second plate when a voltage is applied across the first and second electrodes, the electron release region having a thickness lying between said one electrode and the second plate, said one electrode and the second plate being spaced from each other by a facing distance that is no greater than the thickness of the electron release region, the facing distance being between 25 and 45 μ m.

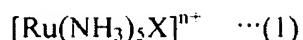
2-6. (Cancelled)

7. (Original) The thin analysis tool according to Claim 1, wherein the reaction space is constituted such that the sample is moved by capillary force.

8. (Original) The thin analysis tool according to Claim 1, wherein the reagent portion includes an electron mediator and a redox enzyme.

9. (Original) The thin analysis tool according to Claim 8, wherein the electron mediator is a ruthenium compound.

10. (Original) The thin analysis tool according to Claim 9, wherein the ruthenium compound is expressed by the following chemical formula (1):



where X is NH₃, a halogen ion, CN, pyridine, nicotinamide, or H₂O, and n+ is the valence of an oxidized Ru(III) complex determined by a type of X.

11. (Previously Presented) The thin analysis tool according to Claim 10, wherein X in chemical formula 1 is NH₃ or a halogen ion.

12. (Original) The thin analysis tool according to Claim 8, wherein the redox enzyme has glucose dehydrogenation activity.

13. (Original) The thin analysis tool according to Claim 12, wherein the redox enzyme is a glucose dehydrogenation enzyme originating in microbes belonging to genus Burkholderia.

14. (Original) The thin analysis tool according to Claim 13, wherein the redox enzyme has an alpha sub-unit that has glucose dehydrogenation activity and whose molecular weight is approximately 60 kDa as measured by SDS-polyacrylamide gel electrophoresis under reductive conditions.

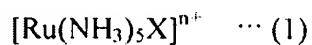
15. (Original) The thin analysis tool according to Claim 14, wherein the redox enzyme has a cytochrome C whose molecular weight is approximately 43 kDa as measured by SDS-polyacrylamide gel electrophoresis under reductive conditions.

16. (Original) The thin analysis tool according to Claim 8, wherein the electron mediator is a ruthenium compound, and

wherein the redox enzyme is a glucose dehydrogenation enzyme originating in microbes belonging to the genus Burkholderia.

17. (Previously Presented) The thin analysis tool according to Claim 16, wherein the ruthenium compound is expressed by the following chemical formula (1),

wherein the redox enzyme includes: an alpha sub-unit that has glucose dehydrogenation activity and whose molecular weight is approximately 60 kDa as measured by SDS-polyacrylamide gel electrophoresis under reductive conditions; and a cytochrome C whose molecular weight is approximately 43 kDa as measured by SDS-polyacrylamide gel electrophoresis under reductive conditions;



where X is NH₃, a halogen ion, CN, pyridine, nicotinamide, or H₂O, and n+ is the valence of an oxidized Ru(III) complex determined by a type of X.

18. (Previously Presented) The thin analysis tool according to Claim 1, wherein the sample liquid is a biochemical sample selected from consisting of blood, urine, saliva, and a preparation thereof, the tool being constituted for performing analysis of glucose, cholesterol, lactic acid, or ascorbic acid.

19. (Currently Amended) A thin analysis tool comprising:

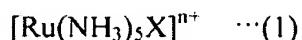
- a first plate formed with first and second electrodes,
- a second plate facing the first and second electrodes of the first plate, and
- a reaction space defined between the first and second plates for holding a sample liquid,

wherein the reaction space is provided with a reagent portion that dissolves when the

sample liquid is held in the space, the reagent portion containing an electron transport mediator,

wherein one of the first and second electrodes provides an electron release region between said one electrode and the second plate when a voltage is applied across the first and second electrodes, the electron release region having a thickness lying between said one electrode and the second plate, said one electrode and the second plate being spaced from each other by a facing distance that is no greater than the thickness of the electron release region for causing diffusion of the electron transport mediator into the electron release region only from sides of the electron release region, the facing distance being between 25 and 45 μ m, and

wherein the electron mediator is a ruthenium compound expressed by the following chemical formula (1):



where X is NH₃, a halogen ion, CN, pyridine, nicotinamide, or H₂O, and n+ is the valence of an oxidized Ru(III) complex determined by a type of X.

20. (Currently Amended) A thin analysis tool comprising:

a first plate formed with first and second electrodes,
a second plate facing the first and second electrodes of the first plate, and
a reaction space defined between the first and second plates for holding a sample liquid,

wherein the reaction space is provided with a reagent portion that dissolves when the sample liquid is held in the space, the reagent portion containing an electron transport mediator and a redox enzyme,

wherein one of the first and second electrodes provides an electron release region between said one electrode and the second plate when a voltage is applied across the first and second electrodes, the electron release region having a thickness lying between said one electrode and the second plate, said one electrode and the second plate being spaced from each other by a facing distance that is no greater than the thickness of the electron release region for causing diffusion of the electron transport mediator into the electron release region only from sides of the electron release region, the facing distance being between 25 and 45 μ m,

wherein the redox enzyme is a glucose dehydrogenation enzyme including an alpha sub-unit that has glucose dehydrogenation activity and whose molecular weight is approximately 60 kDa as measured by SDS-polyacrylamide gel electrophoresis under reductive conditions, and a cytochrome C whose molecular weight is approximately 43 kDa as measured by SDS-polyacrylamide gel electrophoresis under reductive conditions, and

wherein the electron mediator is a ruthenium compound expressed by the following chemical formula (1):



where X is NH₃, a halogen ion, CN, pyridine, nicotinamide, or H₂O, and n⁺ is the valence of an oxidized Ru(III) complex determined by a type of X.